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W. W. CHARTERS ..... *Editor*
J. MACLATCHY ..... *Assistant Editor*

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Educational Research Bulletin

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Reclaiming the "Counter"

By JOSEPHINE H. MACLATCHY

PERHAPS the most significant symptom of arithmetic difficulty is counting when adding. Too often, however, the significance of that symptom is minimized by the assumption that the child is one of those persons who do not and cannot understand arithmetic, and there is always a hope that he may be one of those rare souls who are short in arithmetic but long on English or art. Indeed, there are those who imply that inadequacy in arithmetic is a sign of rarer stuff than the rest of us are made of. Even Thurstone has used the "common observation that many otherwise intelligent individuals seem to have a blind spot in dealing with number" as corroborating his statistical evidence for the "appearance of number facility as a primary factor in intelligence."[1] The writer is disposed to disagree with the old wives' tales, on one hand, and will endeavor to present evidence that the common "blind spot" may be corrected and may serve as positive rather than negative evidence of the presence of "number facility as a primary factor in intelligence." The thesis to be propounded is something like this: counting in addition is more than a bad habit; it is a symptom of seriously inadequate number understanding. But in an intelligent individual, rather than being an incurable and permanent defect, inadequate number understanding can be corrected, and thereafter during the individual's school life he will be able to cope with numerical subject-matter in a manner suited to his general intelligence level.

This thesis, if supportable, offers more than a ray of hope to those deficient in arithmetic. The college Junior failing in engineering mathematics or the Senior longing to specialize in biochemistry but held back by awkward computations can take heart. The child in the "progressive" school who is failing in

[1] "A Conception of Intelligence," *Educational Record*, XVII (July, 1936), p. 446.

the number activities by which he is to become adjusted to this "machine age" also may find in this thesis a hope of release from continued failure, as well as the child, similarly handicapped and supposedly less favored, who is being instructed in a public-school classroom.

The thesis can best be defined through the story of a case. One day when C. was waiting with his tutor to see the supervisor, his former third-grade teacher, who happened in, expressed to the supervisor some surprise that C. should be frequenting an arithmetic clinic. She said that he had learned his addition combinations as well as the best in his grade. This was perplexing to the supervisor for C. had shown every sign of counting in the diagnostic tests to which he had so far been subjected. How could it happen that he counted in addition if he knew his addition combinations? And why, if he had known his combinations in Grade III, did he fail to use them in Grade V?

Since no explanation was forthcoming, the only way to check the apparent test result seemed to be to retrace the diagnosis. C. was asked to repeat the test comprising the 100 addition combinations, but he was urged to fill in only the combinations whose sums he knew. These were: those with sums of 4 or less, several of the pairs which add to 10, and several doubles, $3 + 3$, $4 + 4$, and $6 + 6$. Then the diagnostic test in addition was repeated, and C. worked all the computations orally. In this test the various factors involved in addition are each presented four times in as simple contexts as possible. When C. computed the examples in the diagnostic addition test orally, he showed a marked tendency to hesitate over simple addition exercises in which the decades changed. His complete dependence on counting in column addition did not accord with his earlier reputed success in learning the addition combinations, and his hesitation as he progressed from decade to decade again indicated an inadequate control of the number series. Searching more deeply we found he could not count by rote beyond 29 with any ease. He had to consider which was more, 68 or 74. He could not quickly tell what was the first number after —— ending in ——. In short, C. could not count by rote; he was not familiar with the number series even to 100; he did not know the sums of many addition combinations.

His attempts orally to complete the diagnostic tests in the

other fundamental processes indicated such complete lack of understanding that the tests were dropped. All evidence showed that C.'s difficulty simply stated was that he did not know what number relations meant. In each of the fundamental processes, however, he manipulated the parts of the examples according to the best school practice. He evidently thought arithmetic was a bag of tricks. No wonder he was failing in arithmetic; he could not possibly understand any but the simplest number relations.

THE perplexing problem was that a normal ten-year-old could be such a poor rote counter, for C. had an intelligence quotient above 100 and was rated average or better in all his school work but arithmetic. He was not energetic, and he was discouraged, though not surprised, by his failure in arithmetic at the end of Grade V.

Since C. had good common sense, there seemed to be no reason why he could not learn to count; why he could not learn the order of the number series with certainty; why he could not be sure of the larger of two numbers; or why he could not quickly anticipate numbers in the series below 100. In fact, these seemed bits of knowledge which were almost essential to living comfortably in society.

Since we were confident that he could perfect his rote counting and were curious to see how far he could be guided in arithmetic, the tutoring began. Since this seemed a rather desperate circumstance, a desperate measure was resorted to: a large box of toothpicks was purchased at the Five-and-Ten, and C. began practicing to improve his counting beyond 30. He learned the relations between one's, ten's, hundred's, and so on; he discovered how numbers are made. He related this information which he could see with written numbers. Between the two he mastered the reading and writing of numbers.

By means of his markers he learned to understand the addition combinations. He learned from his manipulations of counters that two certain numbers always combined to make a third certain number. He found that he could only make six pairs of numbers whose sums were 5. He found that the six pairs were always the same. Soon he knew that each number was a definite entity—an abstraction. These facts which he learned by manipulating toothpicks he had been learning from

his experiences with things five years before. Then his knowledge of addition had likely reached the generalization stage for only one or two combinations—a stage indicated by such remarks as, "Everybody knows that." These were many too few for him to understand the applications of that highly abstract set of ideas known as the 100 addition combinations. In his manipulation of the counters under the tutor's direction he returned to the number facts of which he was confident and through actually handling things, actually seeing number facts, he developed his number knowledge to embrace the generalizations and abstractions necessary to understand arithmetic.

He continually failed in arithmetic because his knowledge had been too meagre and too specific to cope with the school's demands upon it. By the end of six weeks with his counters he understood the number series, he knew the 100 addition combinations, and he could with accuracy and reasonable speed add a column of figures. Before many months had passed he had overtaken his classmates. He is now in Grade IX, and arithmetic during the intervening years has not presented any undue difficulties to him.

SINCE we have learned to diagnose extreme cases of arithmetic difficulties, we have found that this story of C. is not unusual, and the state of his arithmetic ignorance, not unique. Twenty children or more with serious arithmetic difficulties who have come to us for help have proved to be in similar states of immature number thinking. All have been poor rote counters; all have been unfamiliar with the number series; all have known only the sums of a few addition combinations. Each has taken from five to seven weeks to master addition. All got subtraction, multiplication, and division under control in a much shorter time than they had taken for addition.[2] All but three, who now are being helped, have overtaken their classmates and have done their arithmetic with proficiency equal to that of their other school work.

What hypothesis will explain C.'s ignorance of numbers since it is very evident from this account that he was not "born short in arithmetic" and since he proved not to be one of Mr. Thurstone's "otherwise intelligent individuals [who] seem to

[2] In assisting the children, a series of practice exercises has been developed in which learning the different types of numerical combinations is emphasized, and in which the various manipulatory processes are understood and then mastered.

have a blind spot in arithmetic"? Simply this: C. was not one of those fortunate infants who as he was acquiring language became acquainted with that specialized group of words and ideas known as counting. He came to Grade I almost destitute of this particular group of ideas. His teachers did not "have time" to find out what he knew about number. They thought the limited amount of counting they gave him would be enough to give him the control of the number series he needed. They thought he had had enough number experiences to recognize 5, 6, 7, and so on as abstract ideas. They did not know that only a very few numbers, perhaps only 1, 2, and 3, were meaningful abstractions for him—the rest were mere words in a series. After five years in school he surely was so unfamiliar with 5 that rather than recognizing groups within it he preferred to count it pick by pick, 1—2—3—4—5, when under his tutor's guidance he first began working with the counters. His primary teachers thought he knew that two given numbers always combined to make a third number; yet in Grade V all but $1 + 1$, $1 + 2$, $2 + 1$, $2 + 2$, $3 + 1$, $1 + 3$, $3 + 3$, $4 + 4$, $5 + 5$, and $6 + 6$, were particular, special experiences to him, and to be recognized each had to be counted. Such, at best, was C.'s inexperience in numbers when in Grade III the teacher presented the 100 addition combinations. C. was an opportunist. He learned the 100 combinations just as he would have learned a rhyme. He did not know that in his teacher's mind and in the minds of most of his classmates they were a part of a beautifully significant whole. When the teacher presented numbers to be added, however, he was thrown back on his limited number experience. He knew numbers could be put together by counting, but he knew nothing of his teacher's belief in the universalities of this experience. Each one was a new, particular experience for him to be solved by laborious counting of fingers. His inexperience in numbers simply closed out meaning. Nothing in numbers beyond his very meagre knowledge meant anything to him.

WHY did he not develop this number experience further? Because of his own lack of confidence, his own sense of confusion, his overpowering discouragement. The description of a sixth-grade boy's attitude toward his own ignorance of numbers will illustrate the interpretations which a child gives

such a personal difficulty. H. was as completely confused as C., but he longed to understand arithmetic with more intensity than C. His tutor said:

> During the first few tutoring periods several distinct impressions of H.'s own interpretations of his case were gained. He wanted to know how to do arithmetic. I have used the phrase "to know how" rather than "to learn" because I think at the time H. did not know that arithmetic facts were learned. He knew that other children knew things that he did not know, but in so far as he could determine they probably had been born knowing these things whereas he had not. He knew he was deficient in arithmetic facts, but he did not know that he could learn them. . . . In talking about his failure in arithmetic he said: "I guess maybe I'm just dumb." . . . The problem was not only to teach H. arithmetic, but to teach him so that he would be conscious of learning—conscious of acquiring new facts through our co-operative efforts, his and mine.

EACH of these more than twenty children with serious arithmetic difficulty with whom we have worked has proved by his mastery of arithmetic processes that at least he, though a "counter" in addition, had not been "born short" in arithmetic when instruction returned to the point where he understood number relations. Such darkness in number thinking persists even to the university and even in spite of learning by doing in the elementary grades and in high school. The Junior failing in engineering mathematics and the Senior longing to specialize in biochemistry mentioned earlier were not the figures of a fervent imagination, but are actual young persons who have to retrace their computational steps to the places where they understand the uses of the processes they are employing. C.'s case history was almost duplicated by a sixth-grade girl of normal intelligence who had attended only progressive schools. She said: "In our school we talk about our arithmetic. I can't talk for I know nothing to say." Evidently the problem is even more fundamental than the means of school instruction.

This is not an argument for the postponement of arithmetic until the intermediate grades. The arguments for or against such a proposal are of quite another sort. This, rather, is a plea that to each child may be granted the privilege of appreciating number as something which he is quite capable of understanding and using.

School Costs in Ohio

A REPORT, entitled "Comparison of Costs per Pupil in Average Daily Attendance in Ohio City and Exempted-Village School Districts for 1934–35 and 1935–36," has been compiled by T. C. Holy, of the Bureau of Educational Research. The report is divided into two parts: a comparison of the costs per pupil in average daily attendance for current school expenses in Ohio cities and exempted villages for the years indicated and a corresponding comparison for total current expenses, debt service, total payments, and capital outlay.

TABLE I

SUMMARY OF DATA ON COSTS PER PUPIL IN AVERAGE DAILY ATTENDANCE IN OHIO CITY AND EXEMPTED-VILLAGE SCHOOLS

ITEM	CITIES		EXEMPTED VILLAGES	
	1934–35	1935–36	1934–35	1935–36
(1)	(2)	(3)	(4)	(5)
Current Expenses:				
General control	$ 2.71	$ 3.50	$ 4.63	$ 5.16
Instruction	59.64	64.31	42.56	49.90
Plant operation	9.96	10.28	8.36	9.25
Plant maintenance	2.63	3.44	2.16	2.42
Auxiliary agencies	1.82	1.92	3.52	3.86
Fixed charges	2.45	2.08	2.29	2.31
Tuition	.08	.05	.31	.18
Total	79.28	85.59	63.83	73.07
Interest	10.52	10.11	8.14	8.60
Debt retirement	19.47	25.31	14.57	18.00
Grand total payments	109.69*	121.25*	86.54	99.68
Capital outlay	.81	5.20	6.11	9.80

* These figures do not total correctly because certain items were omitted in a few cities.

The financial data have been taken from Form 25, "Annual Financial Report of Board of Education," a copy of which is filed annually with the Director of Education by each city and exempted-village board of education. The number of pupils in average daily attendance and the length of the school term have been taken from Form 5, "Annual Statistical Report of the Public Schools," a copy of which is likewise annually filed.

Table I shows the average expenditure per pupil in average daily attendance for each of the items in cities and exempted villages in 1934–35 and 1935–36. These figures are not the average of the per-pupil costs in each district, but have been obtained by dividing the total expenditure for each item by the total average daily attendance.

Teacher Demand and Teacher Turnover in the High Schools of Ohio

By ERNEST G. EMMERT

A SERIES of Masters' theses,[1] making extensive and intensive studies of teaching positions in specific subjects, were written recently under the direction of Earl W. Anderson and D. H. Eikenberry. The sources of the data used in these studies were the reports of high-school principals to the State Department of Education for the school year 1932–33. The information was analyzed and evaluated during the year 1933–34, and by the end of the summer of 1934, the more pertinent information from these studies was condensed in table form.

All of the major high-school teaching fields were analyzed with the exception of the biological and commercial fields. The former was omitted through oversight and the latter is in the process of completion. Music, physical education, and fine arts were omitted because of the lack of adequate information.

Since some schools failed to report regularly to the State Department of Education, the percentages of schools for which information was obtained were as follows: county, 100; exempted village, 83; city, 94; and junior high school, 50. Because of this failure of some schools to report, it was necessary to approximate certain numbers. It is impossible to present here any great amount of the information included in these studies, but it is hoped that enough of the condensed information can be given to aid teacher-training institutions in the guidance of those preparing to teach.

In Table I, it is seen that men definitely dominate the teaching fields of science, mathematics, history, industrial arts, and social science, while women dominate the fields of English, the languages, and home economics. There is probably no justifiable reason why men or women should dominate some of these fields; nevertheless, this precedent has been established by tradition and probably will influence employers of teachers

[1] The specific subject fields analyzed in the theses were: English, George H. Cooke; general science, Paul C. Harger; history, Gerald V. Rupe; home economics, John W. Robison; industrial arts, Lester L. Dickey; Latin, French, Spanish, and German, Alvin E. Hanson; mathematics, Owen J. Work; physics and chemistry, Ernest G. Emmert; and social science, Franklin E. Puderbaugh.

TABLE I

THE ESTIMATED NUMBER AND DISTRIBUTION OF OHIO HIGH-SCHOOL TEACHERS IN CERTAIN SPECIFIC SUBJECTS IN 1932–33

TEACHERS OF:	COUNTY		EXEMPTED-VILLAGE		CITY		JUNIOR HIGH		TOTAL	
	Number	Percentage of Men*	Number	Percentage of Men*	Number	Percentage of Men*	Number	Percentage of Men*	Number	Percentage of Men*
Chemistry	364	91	49	96	226	96	.....	.....	639	93
English	1743	20	148	18	1121	11	550	8	3562	16
French	366	10	40	8	240	9	76	5	722	9
General science	919	81	87	68	280	76	328	64	1614	76
German	16	63	2	0	107	17	20	30	145	24
History	1300	65	101	50	597	46	305	28	2303	55
Home economics	768	.....	54	.....	318	.....	316	.....	1456	.....
Industrial arts	604	100	43	100	485	99	354	100	1486	99
Latin	943	19	55	7	363	6	170	5	1531	14
Mathematics	1205	79	68	67	354	57	692	32	2319	61
Physics	455	98	54	96	193	97	.....	.....	702	98
Social science	1532	64	106	55	654	61	561	28	2853	58
Spanish	35	23	4	0	110	16	14	14	163	17

* Because of lack of space only the percentage of men is indicated. The percentage of women can be determined by subtracting the percentage of men from 100 per cent.

for some years to come. On the basis of these facts, prospective teachers can be guided with increased likelihood of employment into those fields in which they are most likely to teach because of their sex.

The distribution of the various teachers according to the number of years of total teaching experience is summarized in Column 3 of Table II. In the detailed distribution by years of experience the percentages of new teachers in some of the subjects varied but one or two per cent from the percentages of

TABLE II

MEDIAN YEARS OF TOTAL EXPERIENCE AND MEDIAN YEARS IN PRESENT POSITION OF THE HIGH-SCHOOL TEACHERS OF OHIO

Teachers of:	Number	Median Years of Experience*	Median Years in Present Position†
(1)	(2)	(3)	(4)
Chemistry	404	5	2
English	2380	3	2
French	486	4	2
General science	1212	5	2
German	49	13	3
History	1448	6	2
Home economics	1437	3	2
Industrial arts	866	7	2
Latin	1150	5	2
Mathematics	1541	8	3
Physics	491	6	3
Social Science	2474	6	2–3
Spanish	66	6	3

* The range of experience extends from no experience to 26 years or more.

† The range of years in present position extends from none to from 16 to 25 years except in English, general science, industrial arts, Latin, physics, and social science for which the upper limit is 26 years or more.

teachers who had been teaching the subject one or two years. Normally it would be expected that the percentages of new teachers would be somewhat greater than the percentages of teachers teaching one or two years, because there is a tendency for some teachers to stop teaching after the first or second year. If this assumption is correct, then it appears that the demand for new teachers fell in the year 1932–33. This also confirms the fact which will be later found in Table III, namely, that the number of inexperienced teachers appointed in 1932 was probably lower than the average for a normal year.

TABLE III

THE ESTIMATED NUMBER OF INEXPERIENCED TEACHERS IN OHIO TEACHING SPECIFIC SUBJECTS IN 1932–33

TEACHERS OF:	COUNTY		EXEMPTED-VILLAGE		CITY		JUNIOR HIGH		TOTAL		TOTAL
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	
Chemistry	36	1	1	.....	.....	.....	.....	.....	37	1	38
English	27	113	1	11	3	21	.....	.....	31	145	176
French	1	41	.....	1	2	2	.....	2	3	46	49
General science	82	22	4	1	4	1	8	2	98	26	124
German	.....	2	.....	.....	.....	1	.....	4	.....	7	7
History	53	35	.....	.....	1	.....	2	2	56	37	93
Home economics	.....	190	.....	12	.....	21	.....	32	.....	255	255
Industrial arts	53	.....	2	.....	3	.....	.....	.....	58	.....	58
Latin	78	10	4	1	.....	.....	2	2	84	13	97
Mathematics	66	14	2	.....	8	2	.....	.....	76	16	92
Physics	30	.....	2	.....	.....	.....	.....	.....	32	.....	32
Social science	66	50	2	.....	13	2	6	10	87	62	149
Spanish	.....	1	.....	.....	.....	1	.....	.....	.....	2	2

Table II also presents the picture of the teacher turnover in the high schools of Ohio. The mobility of the teachers of Ohio is indicated by the fact that the median number of years of experience in the present position is from two to three years. It would be interesting to know to what extent these teachers have improved their positions by moving and to what extent the children in our schools have benefited or lost by this frequent change.

Some idea of the actual demand for teachers in our high schools is shown by the numbers of inexperienced teachers entering the teaching profession in 1932–33 shown in Table III. Although these numbers are estimations, they are fairly accurate. It should be borne in mind, however, that these figures present the situation for a depression year and are likely lower than for normal years. It is interesting to note further in Table III that the demand for teachers in the various fields varies greatly; this fact should be carefully considered by teacher-training institutions. It is also evident that most of our inexperienced teachers obtain their first teaching positions in schools under county supervision, and for that reason emphasis should be placed by training institutions on the problems and conditions that will be met in those schools as well as those to be found in the urban and city school systems. [Vol. XVI, No. 4]

* * *

THE years of school life are usually the period of greatest stress and danger for eyesight, declared Dr. Edward Jackson, of Denver, Colorado, speaking on "Guarding the Sight of School Children" at the Annual Conference of the National Society for the Prevention of Blindness, at Columbus, Ohio. "The prevention of blindness implies the conservation of partial sight, and is only complete when it is applied early in life." Blindness due to disease has decreased during recent years, but poor vision due to improper lighting is increasing. In the schoolrooms, Dr. Jackson continued, many errors are tolerated with reference to the lighting; teachers need to be instructed in how to give their eyes the best chance by appropriate arrangement of the light. In most schoolrooms, we rarely find above 100 foot candles on the desks of the students, and sometimes it runs down to 10 or 15—or even 2 or 1.

Can Youth's Appreciation of Motion Pictures Be Improved

By F. P. FRUTCHEY

It is common knowledge that youth's appreciation of motion pictures improves with training and maturity. For example, Johnny's preference for serials and Western thrillers may change to one for better types of motion pictures. For many high-school students, Western thrillers are a bore. Improvement in motion-picture tastes, however, is not made by all youth incidentally. A taste for less desirable pictures may linger into adulthood. Witness the adult applause when the Saturday-night Westerner is shown, or the Friday-night serial. As young people mature in age, they do not necessarily mature in appreciation of motion pictures. Influential experiences must be provided youth to improve its appreciation of motion pictures. The studies reported in the Payne Fund monographs present evidence which clearly points to the need of the development of intelligent motion-picture appreciation.

Can the school, the influence of which extends into the home, do anything to develop an intelligent appreciation of motion pictures? Obviously, the way to answer this question is to try some methods with young people and see if improvement is made. The National Committee for the Training of Motion Picture Appreciation, co-operating with the state departments of education and the teachers of California, Connecticut, Iowa, North Carolina, and Ohio, has planned and carried through demonstration programs. The results show that through the teaching demonstrations the development of intelligent motion-picture appreciation can be begun in the high school.

Several objectives were formulated for these courses in motion-picture appreciation. These represent the directions in which improvement should be made. The four major purposes were: first, to acquaint students with the influence of motion pictures on children, youth, and adults; second, to teach high-school students to select their motion-picture entertainment more wisely; third, to develop student leadership as far as the motion-picture problem is concerned; and fourth, to teach high-school students to see and hear more at motion pictures.

Some of the results I am about to present are taken from a

report of the co-operating schools by Mr. Edgar Dale, of the Bureau of Educational Research at Ohio State University. The results of the inquiry blank, used to introduce the question of the influence of motion pictures and to discover the students' opinions concerning it, indicated that they were quite aware of this influence. On the average, they subscribe to statements like these, "Some children do not sleep well after going to the movies" and "Young children are greatly influenced by what they see at the movies—high-school students are influenced but little." The students were not far below a group of adults interested in studying the effects of motion pictures and familiar with the Payne Fund studies. On the average, this group of adults subscribed to statements like these, "Many young people 'worship' the heroes and heroines they see in the movies" and "One good way to help end wars would be to show the horrors and hardships of war in the movies and to show peace as very attractive." Although high-school students do recognize in some degree the influence of the screen, Mr. Dale points out that the "whole broad question of the motion picture in society has not been adequately dealt with in the motion-picture appreciation classes thus far developed. The presentation of the materials dealing with the influence requires a technique and method uniquely its own. This work on the teaching of the influence of the motion picture needs further extension, possibly under the social studies and home-economics classes."[1] Future attacks on this problem require the formulation of promising teaching procedures and materials and experimentation for testing them.

Another major purpose was to teach high-school students to select their motion-picture entertainment more wisely. Where do high-school students get information about the movies they see? Do they consult the posters outside the theater, the previews on the screen, newspaper advertisements, published reviews, their friends, their teachers, their parents? On a blank listing 15 possible sources, 35 per cent of the students at the beginning of the experiment indicated that at least sometimes they consult lists of recommended motion pictures like those published in *Parents' Magazine* and *Educational Screen.* By the end of the experiment this percentage had increased to

[1] Dale, Edgar. "Teaching of Motion Picture Appreciation." Columbus, Ohio: Bureau of Educational Research, Ohio State University, 1936. p. 5. (Mimeographed report to the co-operating schools)

48 per cent, a gain of 13 per cent in a desirable direction. The school contributes little in giving information about motion pictures. At the beginning of the experiment only 4 per cent of the students indicated that sometimes they get screen information from their teachers. At the end of the experiment the percentage of students had jumped to 11 per cent. Although improvement has been made, the school as a cosmopolitan educational agency gives little help in selecting motion pictures.

LIBRARY studies have shown that availability of books is an important factor in the kinds of books people read. Books which are accessible are read more than books that are not so accessible. This principle has a promising application in making reviews of coming movies available to students. Bulletin boards, school papers, school libraries are places easily accessible to students. The classroom itself presents another opportunity. One sheet of paper with reviews of the movies for the coming week can be mimeographed and distributed at little cost. I suspect there are many children just beyond the threshold of availability who would consult sources if they were handy.[2]

We do know that at the beginning of the experiment 43 per cent of the students indicated that they read the advertisements that are handed to them as they come out of the theater. It seems equally likely that they would read well-written reviews if they were also easily available. It is interesting to note that at the end of the experiment 39 per cent indicated that they read the advertisements that are handed to them as they come out of the theater, a decrease of 4 per cent.

At the beginning of the experiment 84 per cent said they looked at the posters on the outside of theaters. Here again availability of information appears to be an important factor in selecting movies. At the end of the experiment 75 per cent said they did, a decrease of 9 per cent.

A third major purpose of the demonstration experiments was to develop student leadership as far as the motion-picture problem is concerned. Can we begin in the high school and develop potential leaders, concerned with the motion-picture problem? Some attempts have been made in this direction. At Oakland, California, two high-school forums have been held

[2] The *Motion Picture Review Digest*, published weekly by the H. W. Wilson Company, supplies the best single review service.

before large adult audiences. The following questions were discussed by ten high-school students before an audience of 450 adults: How important are movies in the life of the average high-school student? Upon what basis does the average student choose the movies which he attends? How much does the average student know about moving pictures? Is it really worth while for the schools to attempt to teach motion-picture appreciation? Mr. Keith Tyler writes that the "discussion proved an effective conference technique, as was evidenced by the vigor of the discussion." A careful reading of the stenographic report of the discussion

> shows not only that these boys and girls were thinking in realistic fashion about important problems which concerned them, but also that in their motion-picture appreciation classes they had gained an insight into problems of that field which exceeded that of most adults. This report gives ample evidence from the young people themselves that they had gained much information, had become more critical and appreciative, and selected motion pictures more carefully as a result of their participation in a unit on motion-picture appreciation.[3]

A fourth major purpose of the demonstration projects was to teach high-school students to see more at the motion pictures which they attend. Although it is useful to know what kind of pictures high-school students prefer and what kind they do not prefer in improving their motion-picture preferences, it is also important that they see more at the motion pictures. The students kept a movie diary. As they saw a movie they recorded the date and its name in the diary, and judged how they liked the movie. This has been considered a promising teaching device. It is an excellent means for getting a record of the movies seen and seeing how preferences for movies improve.

But it was thought that young people should also have some basis for judging motion pictures. At the beginning of the experiment the students were asked this question, "If you were to write a motion-picture review what things would you write about?" Ninety-four per cent stated they would write about the acting, 28 per cent mentioned directing, 9 per cent mentioned the reality of the story. These are a few of the standards which were listed. At the end of the experiment 95 per cent

[3] Students and teachers of the Oakland, California, public schools. "A Panel Discussion of Motion-Picture Appreciation." Columbus, Ohio: Bureau of Educational Research, Ohio State University, 1935. p. 3. (Mimeographed)

still stated acting; 68 per cent, directing—an increase of 40 per cent. Twelve per cent mentioned the reality of the story, a slight increase. Thus it appears that students can be made conscious of standards by which to judge motion pictures.

One teacher commented that "I found it most difficult to get pupils to analyze their likes and dislikes. With the groups I taught, the ability to say more than 'I like it' or 'It was no good' seemed to be lacking. When I had not seen the picture, as was the case often, there was little chance to follow up satisfactorily." A promising teaching device to alleviate this difficulty is a list of clearly stated standards which may apply to a motion picture—some such standards as "Does this picture show truthfully the real effects of crime upon the persons who commit crimes?" and "Does the conversation in this picture sound like that which would be heard in real life?" After attending a motion picture, students may apply these standards in judging the picture they have seen. It should help them to see and hear more at the movies they attend.

There is a common belief that as we see more in a motion picture we become more critical and enjoy the movies less. Hence the fun, the entertainment value of the movies, would be lost. After reading comments of students who had been in the course, this belief does not seem to be true. Here are the comments of one student:

> I believe that this course has increased my interest and enjoyment of motion pictures. After having completed this course, I don't go to a picture just to look at the characters work out a particular situation. I watch the other details, such as the lighting on the characters' faces, the settings—to see if they are natural or man-made and if they correspond to the period of time represented.

CAN youth's appreciation of motion pictures be improved? The accumulating evidence definitely shows that it can. One further question to be considered under this general topic is, Can children be made more immune to extreme emotional reactions while seeing motion pictures? You are all well acquainted with the emotional effects that the movies have on children. I recall a case study of a twelve-year-old girl, Mary, who did not like to go to the movies. They frightened her. When the family were going in the evening, she would cry because they did not want to leave her home alone, and she was

afraid the movie might contain some terrifying scenes. This raised a problem in the family. She frequently voiced her dislike of the movies. Later she would go to the movies if she could be sure there were no scenes to frighten her. During Christmas vacation the family decided to go to the movies one evening. Her father looked over the movie menu; there was but little choice. All the movies but one probably contained terrifying scenes. This one was chosen. During the feature picture, a comedy by the way, some scenes were shown in which the principal actor was on a derelict ship used for target practice. As the shells exploded around the ship the comedian climbed into a large waste can. During this time Mary became greatly excited. "Would the ship be blown up? Would he get off? Would he be killed?" These questions Mary kept asking as she wrung her handkerchief, turned her head, and refused to look at the screen. In the meantime her father continued talking to her somewhat as follows, "I wonder how he will get off. Surely there will be some way and it will be a funny way too. I wonder how many times they rehearsed this scene before they actually photographed it." Eventually the ship exploded, Mary screamed, and her father calmly said, "Now we will know how he will get off." The next scene showed the waste can with lid on, floating on the water. The lid came off and the actor poked out his head. Mary sighed and looked relieved. Her father remarked that it was a clever way of getting the actor off the ship and that he had not thought of doing it that way. At later times, conversation at the table drifted to motion pictures and how they were made. This brought up the question of faking and so on.

The following spring Mary's father took her and her friend Jane to a movie they wanted to see. Unfortunately, a serial was on the program. During the serial, Jane became extremely excited and nervous. Mary calmly nudged her father and motioned to Jane. Then she leaned over to Jane and began whispering to her. Today Mary likes some pictures, though the horror pictures she still refuses to see—fortunately.

Evidences from studies of the teaching of motion-picture appreciation clearly show that youth's appreciation of motion pictures can be improved.

EDITORIAL COMMENT

The *NYA*

WHEN a high-school boy or girl secures his diploma, the schools are through with him unless he goes to college. When he turns in his locker keys and books before he graduates, the high school washes its hands of him. Yet those who leave before graduation or do not go to college after graduation are still alive and in these days are more in need of assistance than they were in school.

Millions of out-of-school youth are confused and worried not only about a life career but even about a temporary job. Industry does not need them today, and industry will not need all of them in the immediate future. The age of dependence is being prolonged and will increase as the years go by. This is the trend of industrial service.

The schools have partially met the situation as an emergency by permitting youth to take informal class work in the high schools from which they graduated. In Michigan formal credit toward a degree may be earned in a large number of such high schools. Junior-college education is provided for an increasing number of youths who cannot obtain positions. Vocational schools are increasing their services. But for the scholastically unsuccessful high-school student who does not want to go to school beyond the legal age limit or the high-school graduate who will not or cannot go to college the schools are not meeting their responsibilities. Indeed, many schools are not aware that they have any responsibility.

Such students in such communities are the charge of somebody. The family in our industrialized cities cannot give them work as it could fifty years ago in an agricultural environment. The church is not equal to the task. Yet action is called for by someone.

In this situation the National Youth Administration, commonly designated as the *NYA*, is smashing through into the imagination of citizens and school people alike. The Federal government has set up a concrete demonstration of public concern about this forgotten level of eager life. It has forty-eight units with scores of centers which are working upon the

problem. It gives advice about careers to millions; it provides employment for many of them and finds employment for others. It advises and arranges for appropriate studies for thousands who can profit by further schooling. It has taken up the task that the schools have shunned.

Not all schools have ignored this challenge. Here and there, as notably in Providence, high schools have accepted the responsibility and provided counseling service as well as functional courses for the out-of-school boys and girls of the community; but the number of such instances is so small that their activities are educational news.

Just what effect this infiltration of the Federal government will have upon public polity is not clear. Almost unanimously the states as political units resent particularized financial assistance to their schools from Federal sources because they fear central domination. But in this case, Washington penetrates the state unit and touches individual children within the schools. The assistance thus provided seems to be enthusiastically welcomed even by those states which are most unwilling to accept financial assistance for school systems.

Perhaps the *NYA* is only a temporary relief measure, but there are those who believe that it should be a permanent agency of the central government. Upon what basis is not so clear. Perhaps it should be as special assistance for unusual young people, perhaps as a form of public-works improvements carried on by youth as in the Muskingum conservancy unit, or perhaps to provide scholarships for the brightest students who will make the greatest contribution to the state.

But whatever the future may hold, the *NYA* points the way in its varied forms on the national stage to the need for some agency to care for the out-of-school, and demonstrates in competent fashion that something can be done for them. It is to be hoped that before it terminates its services it will prepare a record of what it has done in what is the most spectacular educational adventure of the present century. Such a record will be of priceless value to those schools and communities which are growing increasingly sensitive to the social and moral needs of the out-of-school.

W.W.C.

READINGS

Books to Read

KANDEL, I. L., Editor. *Educational Yearbook of the International Institute, Teachers College, Columbia University, 1935.* New York: Teachers College, Columbia University, 1935. xviii+631 pp.

This, the twelfth volume of the series, presents a survey of teachers' associations in seventeen nations in North and South America and Europe to which we must add Japan, South Africa, and Australia. Many of the issues which are raised by this survey are controversial in these days: May or should teachers engage in political activity in or out of the classroom? May or should their associations be used for political purposes? Should the profession or a teacher be free in teaching? All these questions are answered in the negative in the totalitarian states; and it is interesting, at least, that the numerous and varied associations to which we in the United States are accustomed can be found only in free countries, the British dominions, the Scandinavian countries, Czechoslovakia, the United States, and a few others. No more dramatic story of the effect of political change upon education has ever been told than the anonymous story here of the teachers' associations before and under Hitler. The remark is made for what it may be worth that, according to reports, the churches give the dictators a little trouble but no "strong man" has ever been stopped by a teachers' association. There are also chapters on the American Federation of Teachers, the Fédération Internationale des Associations d'Instituteurs, and the World Federation of Education Associations.

H. G. GOOD

BOGOSLOVSKY, B. B. *The Ideal School.* New York: Macmillan Company, 1936. xii+525 pp.

The book fills two bills: it is critical of the present educational scheme and projects a constructive picture of an ideal secondary school. The first part, a witty Socratic dialogue, is devoted to the criticism of principles and practices in current progressive schools. The familiar slogans on freedom, growth, self-expression, social adjustment, liberation of intelligence are made ridiculous through apt but often misleading metaphors and clever arguments. Thus, we are treated to titles like: "indoctrination under anaesthesia," "plastic surgery of mind" (group discussion), "the kingdom of howness" directed by a "demagnetized compass." Some of the criticism is penetrating, some of the discussion full of insight, but the whole is unconvincing because of the too obvious intent to ridicule.

In the second part, the visitor to the "ideal school" is taken through its major divisions: universe, civilization, culture, personality, and self-building. The curriculum in each is made up of such a prodigious array of subject-matter and activities that one wonders whether a high-school or curriculum for life is described. All conceivable technological devices, such as radio, motion pictures, light control, and architectural inventions, are put to work in the physical

plant of the school. This is done to such a degree as to make the school appear one of the fantastic dreams of Mr. Wells.

The underlying philosophy is that of personalism with emphasis on human relationships, human values, and creative experience. At points, a definite tinge of mysticism appears. Sandwiched in throughout the discussion are some keen philosophical observations on the American scheme of values and ways of life.

HILDA TABA

BOSSING, NELSON L. *Progressive Methods of Teaching in Secondary Schools.* Boston: Houghton Mifflin Company, 1935. xvi+704 pp.

In this book the reader finds an introduction to teaching in the secondary schools, a summarization of outstanding phases of education for a course in general methods. Mr. Bossing briefly handles the function, history, and philosophy of education; and in an eclectic manner presents distinct units on "Management Technique of the Class Period," "Teaching Technique of the Class Period," "The Problem of Method," and "The Problem of Evaluating Teaching." In its comprehensiveness, the book offers an advance over most parallel textbooks; but this comprehensiveness makes difficult for the reader a thorough understanding of those parts he has not time to continue in detail.

The 250-page section on method is admirably handled. Each technique, however, when presented and evaluated tends to be less precise than a student might desire for understanding and use.

Basically, the book follows Dewey's philosophy; specifically, it includes much of Thorndike, Charters, Kilpatrick, Burton, Waples, Thayer, and others who have stood out in the field. As a result, the undergraduate student for whom the book is intended would have little inclination to judge between methods, techniques, and philosophies, and would be tempted to accept all as of a parity.

GEORGE H. MCCLELLAN
East High School, Columbus

PROGRESSIVE EDUCATION ASSOCIATION. *Growth and Development.* New York: Progressive Education Association, 1936. vii+292 pp.

Contained in this volume is "a distillation of the annual conference of the Progressive Education Association" for 1936. The numerous brief papers, concerned with all angles of child development from birth to late adolescence, are contributed by authors well known in the field of education. Some of the articles are discussions of general material; others contain reports of research and a survey of their implications for the training of children. Still others contain brief descriptions of larger publications of like variety. The tenor of the book encourages a sympathetic understanding of children of all ages and a realization of the importance of guiding children socially, emotionally, and educationally according to their needs.

The variety of the material and the practical and interesting nature of most of it may be indicated by the titles of some of the papers: Men and Women as Parents and as People; Projection as a Factor in Family Adjustments; The Social Value of Unadjustment; Physical Development from Fifteen to Twenty-two; Child Development in the Rural Environment; What Do We Mean by Social Sciences for Children between Two and

Seven; Creative Writing and Dramatics; A Study of the Voices of Young Children; Movies and the Radio; Shall We "Indoctrinate"?

The material is written for the most part in straightforward discursive style. A few of the papers include bibliographical material. In general, the presentation is such as to appeal to teachers and to parents who take an interest in educational problems.

HARRIET HICKS

LANGFORD, HOWARD DAVID. *Education and the Social Conflict.* New York: Macmillan Company, 1936. xxviii+210 pp.

This is the third biennial Kappa Delta Pi Research Award publication on the topic: "What educational program will best meet the needs of our developing social and economic situation?" In the Foreword, Alfred Hall-Quest notes that "the author alone is responsible for the views he presents."

In sum, the book is an interpretation of the Marxian economic state, plus an injunction to teachers to go forth and shape American society in the image of Soviet Russia. Educators are to unseat the individuals now in control by violence if necessary. Thus, forces now latent in the great exploited masses will be released "to sweep away the present inequitable system of social machinery and to build a new social system, designated to serve the essential human interests of all."

While the writer is captured on occasion by the author's social philosophy, the latter's audacity, mental agility, and sheer idealism are things at which to marvel at all times. Distinguished contributors to the *Educational Frontier* may be interested to know that they have been examined and found wanting. They are, says Mr. Langford, more idealistic than dialectic; in fact, they are far too slow on the uptake to spin the world as it should be spun.

LLOYD A. COOK

NORTON, JOHN K., AND NORTON, MARGARET ALLTUCKER. *Foundations of Curriculum Building.* Boston: Ginn and Company, 1936. x+599 pp.

The recent books in the curriculum field have emphasized the techniques of curriculum construction and the controversial issues of the area. This textbook reviews the controversies and also evaluates the literature dealing with the content of the curriculum. In each of the major subject-matter fields it presents what amounts to an interpretation of the important studies. It is an indispensable aid for curriculum classes.

W. W. CHARTERS

LAY, WILHELM A. *Experimental Pedagogy with Particular Reference to Education through Activity.* Translated by Adolph Weil and Emanuel K. Schwartz. New York: Prentice-Hall, Incorporated, 1936. x+371 pp.

This little work by the founder or, at least, an important cofounder of experimental pedagogy in Germany was originally written (1907) for B. G. Teubner's series entitled "*Aus Natur und Geisteswelt.*" It has long since been translated into several European languages and into Japanese but is now first rendered into English. In its original form this "primer of experimental pedagogy" went through three editions, and it is from the third (1918) that the translation was made. The translators have produced a clear, idiomatic English text, and the publishers have issued it in an attractive volume. The

translation was inspired by Professor Paul Radosavljevich, of New York University, who has supplied a 125-page historical introduction. This deals with Mr. Lay's work, methods, writings, and influence, and concludes with an extensive bibliography pertaining to these matters. The work will contribute to the understanding by English peoples of an important experimentalist and a vigorous but still youthful movement.

H. G. Good

Gray, John Stanley. *The Psychological Foundations of Education.* New York: American Book Company, 1935. xiii+534 pp.

Mr. Gray distinguishes between the different systems of psychology and their philosophical backgrounds. The first half of the book contrasts the views of various systems concerning man's original nature, the way the human organism operates, emotional behavior, and language and intelligence, showing the advantages of an objective or biological viewpoint. The second half discusses critically the implications of the various systems of psychology for educational practices, with a proposed outline of methods and curriculums based on the postulates of objective psychology. Since society is composed of institutions in which specialists live co-operatively, the school should develop in the child his special abilities in a social environment. It is impossible for us to determine now what factual knowledge is going to be of importance to the child in his adult life. We can, however, teach the child how to solve problems so that he can adjust to life situations as they arise. Specialization and co-operation can be best taught through projects organized into units. By proper control of the classroom environment an interest in projects can be aroused spontaneously. The author has been much influenced in his psychology and educational philosophy by Weiss, Bode, and Dewey, and his book is an interesting attempt to bring together the views of these men.

Beverley E. Holaday

Cole, Luella. *Psychology of Adolescence.* New York: Farrar and Rinehart, 1936. xvi+503 pp.

Gradually science is furnishing the facts with which a more exact picture of adolescence may be constructed. The author of this book set for herself the task of presenting a relatively comprehensive picture of the adolescent years on the basis of fact, in a way that would be practical and useful for the guidance of teachers and others who are responsible for encouraging adolescents to put away childish things and to become normal adults. Her careful selection of relevant investigations to serve as a basis for this treatise, her consistency in avoiding lengthy treatment of controversial theoretical matters and subjective accounts of adolescent phenomena, and her frequent applications and illustrative cases are indications of her success.

One-half of the book is devoted to consideration of the development and characteristics of normal adolescence, about one-fourth to the problems of deviates from normal, and another fourth to environmental influences of the home, school, and community. The book begins with a statement of the changes in high-school population during recent years and closes with a consideration of the criteria of adulthood which mark the end of adolescence.

The author's style is straightforward and interesting; the vocabulary is within the grasp of undergraduates and intelligent adults; the text is well

organized; ample attention is given to recent investigations, over half of the citations being to studies published since 1930; and many suggestions are offered to assist teachers to transfer these principles to their daily procedures. These characteristics make this an invaluable handbook for teachers and counselors of adolescents and a suitable textbook for courses in this field.

C. O. MATHEWS
Ohio Wesleyan University

RUCKMICK, CHRISTIAN ALBAN. *The Psychology of Feeling and Emotion.* New York: McGraw-Hill Book Company, 1936. xiii+529 pp.

Mr. Ruckmick introduces the reader to an ample survey of the field of feeling and emotion, and follows this with a comprehensive criticism of the history of the subject. He presents a systematic treatment of the range of affective life, affection, and classification of the emotions. This is followed by consideration of the James-Lange theory and the present-day theories of emotion including a new point of view as expressed by the author in a phylogenetic theory of affective life. The various experimental methods of studying emotional behavior and the limitations of each method are presented. Mr. Ruckmick discusses feeling and emotion in their relationship to the fields of pathology, psychoanalysis, child psychology, and animal psychology, and from an educational and cultural point of view. Each chapter is followed by a set of well-selected review questions and a selected bibliography. The student of the affective life should find this book a comprehensive presentation of the subject. The educator should find the chapters on education and cultural life of special interest.

ROBERT YULE WALKER

HULBERT, WINIFRED. *Latin American Backgrounds.* New York: Friendship Press, 1935. xii+209 pp.

This volume is an attempt "to sketch in the backgrounds necessary to an understanding of the human problems of today and to interpret geography, history, and the complex social institutions of the present in terms of their effect on human progress and happiness." The approach is primarily historical, including accounts of the Indian cultures, the Spanish colonial empire, the period of liberation, and each country since the beginning of independence.

The treatment, drawn from a large number of works dealing with various aspects of Latin American life, is necessarily brief. Emphasis is placed upon Evangelical Protestant Christianity as an important means of meeting the problems of the twentieth century in these countries.

R. H. ECKELBERRY

EURICH, ALVIN C., AND CARROLL, HERBERT A., *Educational Psychology.* New York: D. C. Heath and Company, 1935. vii+436 pp.

This book is the textbook growing out of the course in educational psychology at the University of Minnesota. Teachers trained at Minnesota once counted this course the most helpful in their professional curriculum. A textbook developed in a course so highly recommended should be good, and it is. As the school widens its horizons, teachers find that they cannot understand the pupil in the classroom unless they know the child outside the school system. From the standpoint of a reviewer this means that textbooks in educa-

tional psychology are becoming increasingly difficult to distinguish from textbooks in general psychology. An innovation is a chapter on "Esthetics in Education" where Carroll himself made substantial research contributions. Eurich's interest in measurement is apparent throughout the book.

Teachers whose psychology is more than five years old will benefit considerably from reading this book. They will not find many techniques to save them from thinking about individual cases, but they will find an emphasis on the unique learning problem of each pupil as an individual where the so-called laws of learning of a decade ago will not fit.

W. L. VALENTINE

NUGENT, DONALD R., AND BELL, REGINALD, Editors. *The Pacific Area and Its Problems: a Study Guide.* New York: American Council, Institute of Pacific Relations, 1936. 234 pp.

Dividing the far eastern Pacific area into the nine regions of China, Japan, Manchoukuo, Soviet Siberia, Netherlands East Indies, Philippine Islands, Hawaii, Australia, and New Zealand, the authors, with the assistance of Walter G. Buckisch, Franz Melandy, and W. H. Williams, have prepared thirteen chapters presenting modern political developments and attendant problems of these areas. One chapter traces political developments of modern China; another, modern Japan; and a third, the relations between China and Japan. Each of the other areas is treated in individual chapters as are also world problems of population migrations, markets, and armaments in the Pacific area. Each chapter is followed by a complete outline of its material which in turn is followed by several pages of problems concerning the material treated, with suggestions for their solution. At the end of each chapter are listed selected references. Although the material of each chapter consists entirely of national development, the book cannot be considered a political science or history textbook. It is a study guide to the Pacific area. Present-day problems are indicated but not solved, and good source material is suggested; but it is for the instructor and the student to make of it what they choose.

JOHN H. GARLAND

PERKINS, CLELLA LESTER. *How to Teach Music to Children.* Chicago: Hall and McCreary, 1935. vii+216 pp.

The author has done exactly the thing which she states in the Preface; she has written a much needed book for the classroom teacher who has had little training in music and for whom there is little music supervision. Part One discusses the activities found in the elementary grades, including singing, the rhythm band, dramatization, music, and the development of rhythm. The terminology is simple enough so that any teacher sincere in her desire to teach music, may find excellent help. Part Two is devoted to the usual planning of lessons, the organization of which smacks too much of the former stereotyped manuals which suggest the blind following of plans rather than adaptation of materials to individual needs of children. Teachers should be credited with enough intelligence to select materials from suggested lists to fit the varying interests and abilities of children. Part Three gives a number of songs, all of which are taken from the *Silver Book*; many of these are available on phonograph records. Most of these songs are worth while in that

they answer a definite teaching use, but when tested as to art values, they fall somewhat short of artistic merit. The list includes many good folk tunes. The ranges and vocal arrangements are good and meet the needs of the average school. Part Four is devoted to a clear explanation of the so-called Fundamentals of Music. Here is discussed much material more difficult than most teachers can use, so let them not be discouraged if they are not familiar with all the knowledge that this chapter contains. Again, let me say here is a book much needed by many teachers to whom the musical taste of the children of America is entrusted.

JOSEPH A. LEEDER

FOX, LILLIAN MOHR, AND HOPKINS, L. THOMAS. *Creative School Music.* New York: Silver, Burdett and Company, 1936. x+326 pp.

For those teachers who are interested in applying the principles of modern education to the teaching of music, this book should prove interesting and helpful. It is divided into three parts. The first section is devoted to the contrast of the traditional and the new viewpoints in education, and to a thorough discussion of creativeness—the nature of it, and ways of encouraging it. The underlying philosophy is largely that of William H. Kilpatrick. The second part of the book deals with the implications of creative learning in music. Methods for developing and encouraging creative expression in children are set forth. In as much as these methods suggest a way, but not necessarily the only way, this section of the book is valuable. Mrs. Fox has had a great deal of experience in her work with children in the schools of Pasadena. Undoubtedly, much of her success lies in the fact that through scansion and feeling for balance and form, she develops in children a great variety of creative expression in music. One cannot help realizing while reading her book, however, that the children were free to work in challenging situations that were fraught with many possibilities for such expression. The discussion of the Indian unit bears out this point. The third section of *Creative School Music* is devoted to charming examples of original songs and their illustrations by children of all ages, ranging from nursery school and kindergarten through the junior high-school level.

A note of warning should be sounded for those who have been eager to begin creative work with children, but have preferred to wait until someone came forth with a definite method of how to do it: Do not accept too wholeheartedly any device or method which seems to insure excellent results quickly. Absorb all you can from the experience of others, but remember yours is an entirely different situation, and may require a different approach.

BEATRICE PERHAM

BELL, VIOLA M. *Chemistry Used in Foods and Nutrition Courses.* Columbus, Ohio: Ohio State University, 1936. v+84 pp. (Bureau of Educational Research Monographs, No. 21)

This monograph reports the findings of a doctoral dissertation which attempted to determine the chemistry which is "prerequisite to an understanding of foods and nutrition courses given in colleges and universities." Principles and vocabulary were found by analyzing textbooks, bulletins, and articles from periodicals referred to in the syllabus for foods and nutrition courses in twenty-one land-grant institutions. Teachers of foods and nutrition

courses and experts in chemistry evaluated the principles for importance for home-economics students.

Lists of the 555 principles with the ratings of the two juries and of the 3,782 chemistry substances and terms with the frequency of occurrence in the literature analyzed are given in this publication. Directions for the use of these lists and an illustration of their use in one institution are also included.

For a long time college administrators and teachers have been conscious of the curriculum problem relating to prerequisites and service courses in many areas. This study illustrates one method of attacking this difficult problem and gives materials which can be used by teachers of chemistry and of foods and nutrition who accept the point of view underlying the study.

HESTER CHADDERDON
Iowa State College

QUAYLE, MARGARET SIDNEY. *A Study of Some Aspects of Satisfaction in the Vocation of Stenography.* New York: Teachers College, Columbia University, 1935. vi+121 pp. (Teachers College, Columbia University, Contributions to Education, No. 659)

In this study a number of white, unmarried women stenographers between the ages of nineteen and thirty-one were divided into two groups. By their own statement, sixty-three regarded themselves as satisfied, and sixty-one reported they were always or sometimes dissatisfied with their chosen vocation. The writer aimed to find out how the personality, ability, and interest patterns of those who are happy in business differed from those who are unhappy.

Some of the striking differences found were: (1) Satisfied stenographers believe they made their own vocational choices deliberately, while the dissatisfied stenographers reported that their choices of vocation were influenced by other people and because the training was easiest to obtain. (2) The unhappy group tended to resent the authority of others. (3) The satisfied group reported more advancements and less salary cuts during 1931–32 than did the dissatisfied group. (4) The socioeconomic status of the home was less related to their vocational happiness than the psychological relationships within the family. (5) Satisfied stenographers reported being happy in school more often than did the dissatisfied ones. (6) The satisfied stenographers had consistently pleasanter relationships with their families than the dissatisfied ones had, but the dissatisfied stenographers had more satisfactory social relationships with men than the satisfied ones. (7) The dissatisfied stenographers tended to desire to change their homes and their work more than did the satisfied stenographers.

Ten case studies were given, from which the reader is asked to pick five that were satisfied and then turn to the end of the chapter to verify his results. The most serious criticism the writer found was an almost complete absence of any adequate future plan or goal.

CHLOIE D. MCGLINCHAY
Central High School, Columbus

Teacher-Recommendation Service

ADMINISTRATORS looking for able teachers are getting much help from the Appointments Division, the Bureau of Educational Research, Ohio State University. In this office are registered the credentials of more than five thousand teachers, mostly experienced, but including more than four hundred graduating from teacher-training courses in 1937. In addition there are many with Masters' or Doctors' degrees.

All graduates from the College of Education since 1928 are registered with the Appointments Division. Their records are available to any administrator who is considering one of them as a teacher.

The large number of teachers enrolled makes it possible for the Appointments Division to find well-trained people for a wide range of demands. Requests for assistance will be answered promptly, carefully, and candidly by Earl W. Anderson or Mary A. Ewan, Appointments Office, Ohio State University.